REMARKS/ARGUMENTS

Upon entry of the present amendment, claims 1-16 will have been canceled and claims 17-23 will have been submitted for consideration by the Examiner. In view of the above, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections of all the claims pending in the present application. Such action is respectfully requested and is now believed to be appropriate and proper.

Initially, Applicant would like to express his appreciation to the Examiner for the detailed Official Action provided, and for the acknowledgment of Applicants' claims for priority under 35 U.S.C.§119 and receipt of the certified copies of the priority documents in the Official Action. Applicant also notes with appreciation Examiner's acknowledgment of Applicant's Information Disclosure Statements filed in the present application on May 18, 2000, February 7, 2001, and January 7, 2002 by the return of the initialed and signed PTO-1449 Forms, and for consideration of the documents cited in Information Disclosure Statements.

However, Applicant also filed Information Disclosure Statement (IDS) in the present application on November 19, 2002, the receipt of which has been configured by the U.S. PTO's private PAIR system (entry No.10). Thus, Applicant respectfully request that Examiner send a copy of the signed PTO-1449 Form to

Action.

Applicants with the next Official Action so as to confirm consideration of the documents cited in this IDS.

Turning to the merits of the action, the Examiner has rejected claims 1-16 under 35 U.S.C. § 102 (b), as being anticipated by SHIGETAKA (JP Patent Publication Hei 10-322508).

As noted above, Applicant has canceled rejected claims 1-16 and has submitted new claims 17-23. In this regard, Applicant notes that newly added claim 17 generally corresponds to original claims 1 and 2, and that newly added claim 18 generally corresponds to original claim 3. Newly added claim 19 generally corresponds to original claim 9. Newly added claim 20 generally corresponds to original claims 13 and 14. Newly added claim 21 generally corresponds to original claim 10. Newly added claim 22 generally corresponds to original claim 5. Newly added claim 23 generally corresponds to original claim 15. In view of the herein-contained amendments and remarks, Applicant respectfully traverses the above rejection in view of newly added claims 17-23, and will discuss this rejection with respect to the pending claims in the present application as set forth hereinbelow. These newly added claims merely clarify the subject matter recited in the canceled claims, and do not narrow the scope of the claims.

Applicant's claims 17-19 generally relate to an Internet facsimile apparatus which comprises a panel with a plurality of keys and a memory that stores a default domain name. The Internet facsimile apparatus also comprises a controller that, when a user name not including "@" is input via the panel, generates an e-mail address by adding the default domain name stored in the memory to the user name input via the panel, and transmits an e-mail directed to the generated e-mail address. Further, the controller inputs "@" between the user name input by the panel and the default domain name stored in the memory when the controller generates the e-mail address. Claim 20 generally recites a related method.

Applicant's claims 21-22 generally relate to an Internet facsimile apparatus which is connected to a relay apparatus. The replay apparatus relays facsimile data, which is attached to an e-mail, to another facsimile apparatus. The Internet facsimile apparatus has a panel with a plurality of keys and a memory that stores a domain name of the relay apparatus. The Internet facsimile apparatus also has a controller which, when a facsimile number is input by the panel, generates an e-mail address by adding, the domain name of the relay apparatus stored in the memory and a command indicating an instruction to relay the facsimile data to the another facsimile apparatus, to the facsimile number input via the panel, and which transmits an e-mail directed to the generated e-mail address. Further, the controller sets the command before the facsimile number input via the panel, sets the domain name of the relay apparatus stored in the memory after the facsimile number input via the panel, and inputs "@" between the facsimile number input via the panel and the domain name of the relay apparatus stored in the memory, when the controller generates the e-mail address. Claim 23 generally recites a related method.

On the contrary, SHIGETAKA relates to a network facsimile apparatus which has a key input equipment, a screen display machine, and a buffer that stores domain names. For example, when the user inputs a user name and a delimiter sign "@" of an e-mail address of a destination in order to form the e-mail address of the destination, the network facsimile apparatus displays domain names stored in the buffer. Then, when the user selects one of the domain names stored in the buffer, the network facsimile apparatus connects the input user name and the input delimiter sign "@" to the selected domain name. Thereby, the e-mail address of the destination is formed.

However, as explained above, in SHIGETAKA, the user has to input the delimiter sign "@" of the e-mail address in addition to inputting the user name of the e-mail address. The network facsimile apparatus of SHIGETAKA must have a special key or a special operation for inputting the delimiter character "@" (thereby increasing the size, cost, and complexity of the apparatus), since the delimiter character "@" is not usually present on an alphanumeric keypad for a facsimile operation (see Fig. 5 of the present application). Thus, SHIGETAKA does not disclose the claimed controller which when a user name not including "@" is input via the panel, generates an e-mail address by adding the default domain name stored in the memory to the user name input via the panel. Further, SHIGETAKA also does not teach the claimed controller which inputs "@" between the user name input via the panel and the default domain name stored in the memory when the controller generates the e-mail address.

Regarding claim 18 of the present invention, SHIGETAKA requires the user to select one of a plurality of domain names stored in the buffer, when a user name including "@" is input by the panel. However, in the invention according to claim 18, when a user name including "@" is input via the panel, the invention does not judge that one of domain names is selected, as described in SHIGETAKA, but judges that an entire e-mail address including the user name is input via the panel. Thus, SHIGETAKA does not disclose the claimed controller that, when a user name including "@" is input via the panel, judges that an entire e-mail address including the user name is input via the panel.

Regarding claim 19 of the present invention, Paragraph 43 of SHIGETAKA merely describes a pointer utilized for selecting one of domain names stored in the buffer. This pointer bears no relation to the claimed features of claim 19 since this feature does not relate to selecting one of domain names stored in the buffer, but rather relates to whether or not the controller uses the default domain name stored in the memory. Thus, SHIGETAKA does not disclose the claimed memory which stores a status of a domain flag, the status of the domain flag indicating whether the controller adds the default domain name stored in the memory to the user name input via the panel when the user name not including "@" is input via the panel.

SHIGETAKA also does not teach the controller which, when the status of the domain flag is ON, adds the default domain name stored in the memory to the user name input via the panel.

Regarding claims 21-23 of the present invention, paragraphs 38 and 39 of SHIGETAKA merely teach that when the user inputs not only a user name but also a delimiter sign "@", the network facsimile apparatus displays domain names stored in the buffer, and then when the user selects one of the domain names stored in the buffer, the network facsimile apparatus forms the e-mail address by connecting the input user name and the input delimiter sign "@" to the selected domain name. However, SHIGETAKA does not teach the claimed e-mail address utilized for relaying facsimile data from a relay apparatus to another facsimile apparatus. Thus, SHIGETAKA does not further disclose the claimed controller configured to generate, which when a facsimile number is input via the panel, an e-mail address by adding, the domain name of the relay apparatus stored in the memory and a command indicating an instruction to relay the facsimile data to the another facsimile apparatus, to the facsimile number input via the panel.

Additionally, SHIGETAKA does not disclose the claimed controller which sets the command before the facsimile number is input via the panel, sets the domain name of the relay apparatus stored in the memory after the facsimile number input via the panel, and inputs "@" between the facsimile number input via the panel and the domain name of the relay apparatus stored in the memory when the controller generates the e-mail address.

Therefore, it is respectfully submitted that the features recited in Applicant's claims 17-23 are not disclosed in SHIGETAKA.

Absent a disclosure in a single reference of each and every element recited in a claim, a *prima facie* case of anticipation can not be made under 35 U.S.C. § 102. Since the applied reference fails to disclose each and every element recited in independent claims 1, 20, 21 and 23 (which respectively correspond to original independent claims 1, 10, 13 and 15) and the claims dependent therefrom, these claims are not anticipated thereby. Accordingly, the Examiner is respectfully requested to withdraw the rejection under 35 U.S.C.§ 102.

Accordingly, Applicant respectfully requests reconsideration and withdrawal of the outstanding rejections and an indication of the allowability of all the claims pending in the present application in due course.

SUMMARY AND CONCLUSION

Applicant has made a sincere effort to place the present application in condition for allowance and believes that he has now done so. Applicant has submitted claims for consideration by the Examiner. Accordingly, Applicant has provided a clear evidentiary basis supporting the patentability of all claims in the present application and respectfully requests an indication of the allowability of all the claims pending in the present application in due course.

Applicant notes that this amendment is being made not for patentability, but rather for clarifying the scope of the claims, and therefore render explicit what was already implied in these claims. Further, no acquiescence as to the propriety of the Examiner's rejection is made by the present amendment. All other amendments to the claims which have been made in this amendment, and which have not been specifically noted to overcome a rejection based upon the prior art, should be considered to have been made for a purpose unrelated to patentability, and no estoppel should be deemed to attach thereto.

Should the Examiner have any questions or comments regarding this Response, or the present application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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PATENT ABSTRACTS OF JAPAN

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(71)Applicant : **RICOH CO LTD**
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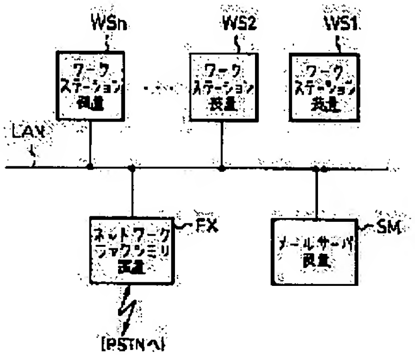
(54) CONTROL METHOD FOR NETWORK FACSIMILE EQUIPMENT

(57)Abstract:

PROBLEM TO BE SOLVED: To simplify input work by storing input contents until then as an input user name by input to the break code of a user name and a domain name, successively reading the domain names from the history information of a domain stored in a buffer to be selected, successively connecting the break code and the selected domain name and forming an address.

SOLUTION: When the break code is inputted and a user establishes the use of the displayed domain name by operating an establishing key, an electronic mail address composed of the inputted user name and the established domain name is formed, the electronic mail address is outputted as the electronic mail address of a destination user, a destination establishing processing for updating a domain name buffer is executed and the processing is ended. For the domain name buffer, the newly used domain name is preserved at the head of the domain name buffer, the elements of the other domain names are successively moved to an old storage position and the domain name buffer is updated.



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CLAIMS

[Claim(s)]
[Claim 1] A function of data on a Local Area Network of an exchange A function of facsimile data based on a facsimile-transmission procedure performed through a public network of an exchange It has an e-mail address input means to be the control method of network facsimile apparatus equipped with the above, and to input an e-mail address for identifying a user on a Local Area Network. A domain name buffer which memorized hysteresis information on a domain name which consists of elements other than a user name of an inputted e-mail address is memorized. With the above-mentioned e-mail address input means If an input to a delimiter sign of a user name and a domain name is carried out, while memorizing the contents of an input till then as an input user name It is characterized by making a domain name read, display and choose from hysteresis information on a domain name memorized to the above-mentioned domain name buffer one by one, carrying out sequential connection of the above-mentioned input user name, the above-mentioned delimiter sign, and its selected domain name, and forming an e-mail address.
[Claim 2] reading appearance of a domain name from said domain name buffer -- carrying out -- a control method of network facsimile apparatus according to claim 1 characterized by carrying out from a near thing of memorized time in order to a late thing.
[Claim 3] Read-out of a domain name from said domain name buffer is the control method of network facsimile apparatus according to claim 1 characterized by carrying out in order of operating frequency.

[Translation done.]

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DETAILED DESCRIPTION

[Detailed Description of the Invention]
[0001]
[The technical field to which invention belongs] This invention relates to the control method of network facsimile apparatus equipped with the function of the data on a Local Area Network of an exchange, and the function of the facsimile data based on the facsimile-transmission procedure performed through a public network of an exchange.
[0002]
[Description of the Prior Art] In recent years, network facsimile apparatus equipped with the function of the data on a Local Area Network of an exchange and the function of the facsimile data based on the facsimile-transmission procedure performed through a public network of an exchange is proposed.
[0003] If such network facsimile apparatus is used, since it can distribute the drawing information from the facsimile apparatus connected to the public network to the workstation equipment linked to a Local Area Network or drawing information can be transmitted to the user of the workstation equipment linked to a Local Area Network, it is very convenient.

[0004] Moreover, when the connected Local Area Network is connected to the Internet, a drawing information send action can be performed also to the terminal unit connected to other Local Area Networks through the Internet, and various use gestalten can be taken.
[0005]
[Problem(s) to be Solved by the Invention] By the way, in a Local Area Network or the Internet, in order to distinguish each user, the e-mail address is applied, and this e-mail address is expressed by the alphabetic character, and, generally has the format which connected the user name and the domain name of a network proper through the delimiter sign (usually "@").
[0006] Therefore, the e-mail address became a comparatively long character string, it was network facsimile apparatus, and when it was going to input a destination user's e-mail address, unless the keyboard equipment of dedication etc. was formed, it had produced the fault of taking the time and effort of an input.
[0007] In addition, although constituting the input unit of an e-mail address is also considered using the key input equipments (for example, ten key etc.) used in case not the keyboard equipment of dedication but the name of the destination registered for example, into an one-touch dial key is inputted, it is unchanging to inputting the e-mail address of a long character string, and does not become it with the dissolution of the fault mentioned above. It is necessary to input especially an e-mail address at every transmission, and since the operability of the input unit poses a problem greatly like the name of the destination registered into an one-touch dial key at the time of registration unlike information to input only at once, it does not become in appropriation of such an input unit to cancel the fault mentioned above.
[0008] Moreover, although an e-mail address and making registration possible are also considered by the telephone number registration field of an one-touch dial, while a major change is needed for the management method of data, the register operation of data, citation actuation, etc., the fault that the number of the telephone number which is the original purpose of an one-touch dial function which can be registered also loses in weight is produced, and it is not desirable.
[0009] Moreover, although registering an e-mail address with a facsimile number and a phase hand name for every one-touch dial is also considered, since the data volume of the registration field for it becomes large, it is not desirable. Moreover, apart from one-touch dial registration, although registering an e-mail address and enabling it to choose is also thought of, the data volume for the registration field becomes large, and is not desirable.
[0010] The invention in this application is made in view of the actual condition mentioned above, and aims at offering the control method of the network facsimile apparatus which can reduce sharply the time and effort of the input of an e-mail address.
[0011]
[Means for Solving the Problem] In a control method of network facsimile apparatus that this invention was equipped with a function of data on a Local Area Network of an exchange, and a function of facsimile data based on a facsimile-transmission procedure performed through a public network of an exchange It has an e-mail address input means to input an e-mail address for identifying a user on a Local Area Network. A domain name buffer which memorized hysteresis information on a domain name which consists of elements other than a user name of an inputted e-mail address is memorized. With the above-mentioned e-mail address input means If an input to a delimiter sign of a user name and a domain name is carried out, while memorizing the contents of an input till then as an input user name A domain name is made to read, display and choose

from hysteresis information on a domain name memorized to the above-mentioned domain name buffer one by one, sequential connection of the above-mentioned input user name, the above-mentioned delimiter sign, and its selected domain name is carried out, and an e-mail address is formed. moreover, reading appearance of a domain name from said domain name buffer -- carrying out -- it is good to be made to carry out in order to a late thing from a near thing of memorized time. Moreover, read-out of a domain name from said domain name buffer is good to be made to carry out in order of operating frequency.
[0012]
[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained to details, referring to an accompanying drawing.
[0013] Drawing 1 shows the network system concerning one example of this invention.
[0014] In this drawing, two or more workstation equipments WS1-WSn, mail server equipment SM, and the network facsimile apparatus FX are connected to Local Area Network LAN.
[0015] Here, mail server equipment SM offers collection of an electronic mail (after-mentioned), and service of distribution to the user using the workstation equipments WS1-WSn connected to Local Area Network LAN, and the network network facsimile apparatus FX.
[0016] Moreover, various programs, such as application software which exchanges various data through Local Area Network LAN, and application software which processes the drawing information included in the electronic mail received from the network facsimile apparatus FX, are introduced into the workstation equipments WS1-WSn, and it is used by the specific user. Here, a specific user may be one person or two or more users.
[0017] Moreover, it connected with Local Area Network LAN, and it connected with the public network (PSTN) with the transmission function for exchanging drawing information as an electronic mail, and the network facsimile apparatus FX is equipped with the transmission function to perform the drawing information transmission by the group 3 facsimile-transmission procedure, using this public network as a transmission line.
[0018] Now, fundamentally in this example, an exchange of the data between [which is connected to Local Area Network LAN] terminals is performed by the combination (the so-called protocol suite) of the transmission protocol to the transport layer called the so-called TCP/IP and the communications protocol of the high order layer beyond it applying. For example, in an exchange of the data of an electronic mail, a communications protocol called SMTP (Simple Mail Transfer Protocol) is applied as a communications protocol of a high order layer.
[0019] Moreover, in this example, distribution of receiving drawing information to each user of the workstation equipments WS1-WSn from the network facsimile apparatus FX is performed using the electronic mail.
[0020] Moreover, at this example, once an electronic mail is accumulated in mail server equipment SM, it is transmitted with the transmission gestalt of the are recording distribution mold distributed to the destination.
[0021] That is, for example, the electronic mail from the network facsimile apparatus FX to the user of workstation equipment WS 1 is once accumulated in mail server equipment SM.
[0022] On the other hand, when electronic mail reception of addressing to a user in the end of a local is asked and the electronic mail addressed to a user is accumulated in mail server equipment SM to mail server equipment SM the proper period, from mail server equipment SM, the workstation equipments WS1-WSn and the network facsimile apparatus FX receive the electronic mail, and notify a user of that in the end of a local.
[0023] Therefore, since it is notified in this case that the electronic mail addressed to the user in the end of a local is accumulated in mail server equipment SM when workstation equipment WS 1 asks mail server equipment SM electronic mail reception of addressing to a user in the end of a local, that electronic mail is received and that is notified to a user by the proper method.
[0024] A carrier beam user reads the contents of that electronic mail for this notice, and the contents are checked. In this case, as mentioned later, in being what contains binary data like for example, facsimile drawing information as contents of the electronic mail, the application which can process that binary data appropriately is started, and it checks the contents of the electronic mail. However, direct binary data cannot be included in an electronic mail, and it includes in an electronic mail in the condition of having changed into legible information (7-bit character code) with the application of the predetermined conversion method. The format of such an electronic mail is called MIME (refer to Multipurpose Internet - Extensions(multiple-purpose mail);RFC (after-mentioned)1521 and RFC1522 grade) format.
[0025] Here, each terminal can apply the so-called POP (Post Office Protocol) etc. to mail server equipment SM as a protocol applied for the confirmation of receipt of the electronic mail addressed to a user, a Request to Send, etc.
[0026] Moreover, communications protocols, such as TCP/IP, and SMTP, POP, data format, a data structure of an electronic mail, etc. are prescribed by the RFC (Request For Comments) document published from the organization which is summarizing the technical contents about the Internet called IETF (Internet Engineering Task Force), respectively. For example, RFC793 and IP are prescribed by RFC793 and the format of RFC821 and an electronic mail is prescribed [TCP / RFC822 RFC1521, RFC1522, and POP] for SMTP by RFC1725, respectively.
[0027] Drawing 2 shows the example of a configuration of the network facsimile apparatus FX.
[0028] In this drawing the system control section 1 Control processing of each part of this facsimile apparatus, It is what performs various control processings, such as facsimile-transmission control-procedure processing. And a system memory 2 When performing the control processing program which the system control section 1 performs, and a processing program, while memorizing various required data etc. Constituting the work area of the system control section 1, the parameter memory 3 is for memorizing various kinds of information peculiar to this facsimile apparatus, and the clock circuit 4 outputs current

time information.

[0029] A scanner 5 is for reading a manuscript image in predetermined resolution, and a plotter 6 is for carrying out the record output of the image in predetermined resolution, the actuation display 7 is for operating this facsimile apparatus, and it consists of various kinds of actuation keys and various kinds of drops.

[0030] The coding decryption section 8 is for decrypting the drawing information by which coding compression is carried out to the original picture signal, while carrying out coding compression of the picture signal, and image storage equipment 9 is for memorizing much drawing information in the condition that coding compression was carried out.

[0031] The group 3 facsimile modem 10 is for realizing the modem function of group 3 facsimile, and is equipped with the slow-modem function (V. 21 modems) for exchanging a transmission protocol signal, and the fast modem function (V. 17 modems, a V.34 modem, V.29 modem, V.27ter modem, etc.) for mainly exchanging drawing information.

[0032] A network control unit 11 is for connecting this facsimile apparatus to the international circuit network PSTN, and is equipped with the automatic sending-and-receiving function.

[0033] The Local Area Network interface circuitry 12 is for connecting this Internet facsimile apparatus to Local Area Network LAN, and the Local Area Network transmission control section 13 is for performing communications control processing of the protocol suite predetermined [various] for exchanging various data among other Data Terminal Equipments through Local Area Network LAN.

[0034] These system control sections 1, a system memory 2, the parameter memory 3, the clock circuit 4, a scanner 5, a plotter 6, the actuation display 7, the coding decryption section 8, image storage equipment 9, the group 3 facsimile modem 10, a network control unit 11, and the Local Area Network transmission control section 13 are connected to the internal bus 14, and the exchange of the data between each of these elements is performed mainly through this internal bus 14.

[0035] Moreover, the exchange of the data between a network control unit 11 and the group 3 facsimile modem 10 is performed directly.

[0036] Now, to transmit drawing information to the user using Local Area Network LAN using an electronic mail, it is necessary to specify the purpose user using the e-mail address currently assigned to the user.

[0037] As for the graphic character which this e-mail address has the format which connected the user name and the domain name of a network proper through the delimiter sign (usually "@") as mentioned above, and constitutes a character string, an alphabetic character is applied.

[0038] In this case, the actuation display 7 of the network facsimile apparatus FX is equipped with the screen-display machine (for example, liquid crystal display) for checking the e-mail address inputted as the key input equipment which can input an e-mail address, and a desired e-mail address can be inputted now into it.

[0039] And in this example, as shown in drawing 3 , only the portion of the domain name of the e-mail address by which the actuation input was carried out until now is extracted. In case it has the domain name buffer memorized in the used order and a user inputs a destination user's e-mail address As shown in drawing 4 , a user inputs to the user name of a destination user's e-mail address, and a delimiter sign "@" in the phase which carried out the actuation input While displaying the domain name memorized to the domain name buffer If a user is made to choose the domain name of a destination user's e-mail address as renewal of sequential of the contents of a display can be carried out, and an input is decided Sequential connection of the user name then inputted, and a delimiter sign "@" and its selected domain name is carried out, and a destination user's e-mail address is formed.

[0040] It enables it to reduce the time and effort of the user at the time of inputting a destination user's e-mail address by this.

[0041] An example of the e-mail address input process in this case is shown in drawing 5 .

[0042] First, a pointer will be set to the head of a domain name buffer, if key input data is incorporated (processing 101, NO loop of decision 102), a delimiter sign "@" is inputted and the result of decision 102 is set to YES until a delimiter sign "@" is inputted (processing 103).

[0043] Next, the data of the domain name buffer corresponding to the pointer is taken out and displayed (processing 104), and a user's key input data is incorporated (processing 105). In order to use the domain name as which the user was displayed at this time, it investigates whether the definite key was operated (decision 106). When the result of decision 106 is set to YES by the case where a user operates a definite key While forming the e-mail address which consists of a user name then inputted and a fixed domain name and outputting the e-mail address as a destination user's e-mail address Destination decision processing (processing 107) which updates a domain name buffer is performed, and this processing is ended.

[0044] Moreover, when it investigates whether the key data inputted by processing 105 is a scrolling key when the result of decision 106 is set to NO (decision 108) and the result of decision 108 is set to YES, one pointer which directs the contents of the domain name buffer is carried forward (processing 109). Here, when it investigates whether there is any following data (decision 110) and the result of decision 110 is set to NO, the contents of return and the domain name buffer which a pointer newly directs are displayed on processing 104.

[0045] moreover, by the case where the key data inputted by processing 105 is other, when the result of decision 108 is set to NO Since it is the case where a user does the actuation input of the electronic mail of the destination user of a new domain name If key input data is incorporated (processing 111, NO loop of decision 112), a definite key is pressed and the result of decision 112 is set to YES until a definite key is pressed While forming the e-mail address which consists of a user name then inputted and a domain name and outputting the e-mail address as a destination user's e-mail address New addition processing (processing 113) is performed to the domain name buffer which updates an addition for the domain name newly inputted into the domain name buffer, and this processing is ended.

[0046] Drawing 6 shows an example of destination decision processing (processing 107).
[0047] First, it is the case where the domain name used immediately before is used again, and when it investigates whether a pointer is in the head of a domain name buffer (decision 201) and the result of decision 201 is set to YES, since it is not necessary to update a domain name buffer, ** and this processing are ended.
[0048] Moreover, when the result of decision 201 is set to NO, it is the case where domain names other than the domain name used immediately before are used. Then, while saving the newly used domain name at the head of a domain name buffer, the element of the other domain name is moving to a storing location old one [at a time] one by one, and updates a domain name buffer (processing 202 - processing 209).
[0049] Drawing 7 shows an example of new addition processing (processing 113) to the domain name buffer.
[0050] First, the domain name of the destination added to a temporary buffer is shunted (processing 301), and a pointer is updated so that the oldest data of a domain name buffer may be directed (processing 302).
[0051] subsequently, the oldest data of a domain name buffer -- deleting (processing 304) -- the element of the other domain name buffer moves to a storing location old one [at a time] one by one (processing 305 - decision 310), saves the domain name which shunted to the temporary buffer at the head of a domain name buffer (processing 311), and ends this processing.
[0052] By the way, although he is trying to take out in the example mentioned above in the order which had the element of a domain name buffer used, it can take out in order of operating frequency. In that case, as shown in drawing 8 , a domain name and a use count are saved as one element of a domain name buffer.
[0053] And a domain name can be made displayed in order of operating frequency in the e-mail address input process shown in drawing 5 in arranging the list of the element of this domain name buffer from a head in order with many use counts.
[0054] An example of the destination decision processing in this case (processing 107) is shown in drawing 9 .
[0055] First, one value of the use count memorized by the domain buffer corresponding to the domain name of the definite destination is increased (processing 401). Subsequently, it is the case where the highest domain name of operating frequency is used again, and when it investigates whether a pointer is in the head of a domain name buffer (decision 402) and the result of decision 402 is set to YES, since it is not necessary to update a domain name buffer, ** and this processing are ended.
[0056] Moreover, when the result of decision 402 is set to NO, it is the case where domain names other than the highest domain name of operating frequency are used. Then, including the newly used domain name, each element of a domain name buffer is rearranged in order of a use count, and a domain name buffer is updated (processing 404 - processing 411).
[0057] An example of new addition processing (processing 113) is shown in the domain name buffer in this case at drawing 10 .
[0058] First, the domain name and use count (since it is the beginning, a value is "1") of the destination to add are shunted (processing 501), and a pointer is updated so that the last data of a domain name buffer may be directed (processing 502).
[0059] Subsequently, while deleting the last data of a domain name buffer, including the newly used domain name, the element of the other domain name buffer rearranges each element of a domain name buffer in order of a use count, and updates a domain name buffer (processing 503 - processing 512).
[0060] In addition, in the example mentioned above, although the data element of a domain name buffer is used as fixed-length data, it can also consider as a variable-length data.
[0061]
[Effect of the Invention] While memorizing the contents of an input till then as an input user name with an e-mail address input means according to this invention if the input to the delimiter sign of a user name and a domain name is carried out as explained above A domain name is made to read, display and choose from the hysteresis information on the domain name memorized to the domain name buffer one by one. An input user name, Since sequential connection of a delimiter sign and its selected domain name is carried out and he is trying to form an e-mail address, the effect that the time and effort which inputs an e-mail address is sharply mitigable is acquired.
[0062] Moreover, the effect that a desired domain name can be quickly obtained by calling the appearance of a domain name buffer in order of the order of use or operating frequency is also acquired.

[Translation done.]

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EFFECT OF THE INVENTION

[Effect of the Invention] While memorizing the contents of an input till then as an input user name with an e-mail address input means by this invention if the input to the delimiter sign of a user name and a domain name is carried out as explained above A domain name is made to read, display and choose from the hysteresis information on the domain name memorized to the domain name buffer one by one, and he carries out sequential connection of an input user name, a delimiter sign, and its selected domain name, and is trying to form an e-mail address. Therefore, the effect that the time and effort which inputs an e-mail address is sharply mitigable is acquired.
[0062] Moreover, the effect that a desired domain name can be quickly obtained by calling the appearance of a domain name buffer in order of the order of use or operating frequency is also acquired.

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DESCRIPTION OF DRAWINGS

[Brief Description of the Drawings]
[Drawing 1] The block diagram having shown the network system concerning one example of this invention.
[Drawing 2] The block diagram having shown the example of a configuration of the network facsimile apparatus FX.
[Drawing 3] The schematic diagram having shown an example of a domain name buffer.
[Drawing 4] The timing diagram which showed an example of the actuation mode of an e-mail address input.
[Drawing 5] The flow chart which showed an example of e-mail address input process.
[Drawing 6] The flow chart which showed an example of destination decision processing.
[Drawing 7] The flow chart which showed an example of new addition processing to the domain name buffer.
[Drawing 8] The schematic diagram having shown other examples of a domain name buffer.
[Drawing 9] The flow chart which showed other examples of destination decision processing.
[Drawing 10] The flow chart which showed other examples of new addition processing to the domain name buffer.

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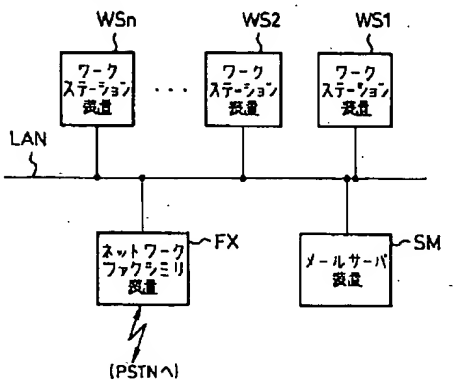
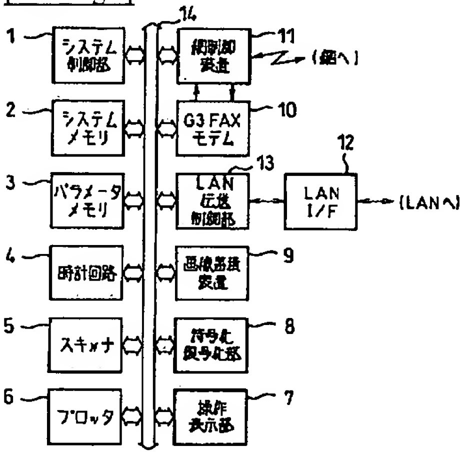
DRAWINGS

[Drawing 1]


WSn
WS2
WS1
ワーク ステーション 装置
ワーク ステーション 装置
ワーク ステーション 装置
LAN
ネットワーク ファクシミリ 装置
FX
メールサーバ 装置
SM
(PSTNへ)

[Drawing 2]


1
システム 制御部
2
システム メモリ
3
パラメータ メモリ
4
時計回路
5
スキャナ
6
プロッタ
14
11
網制御 装置
(網へ)
10
G3 FAX モデム
13
LAN 伝送 制御部
12
LAN I/F
(LANへ)
9
画像蓄積 装置
8
符号化 復号化部
7
操作 表示部

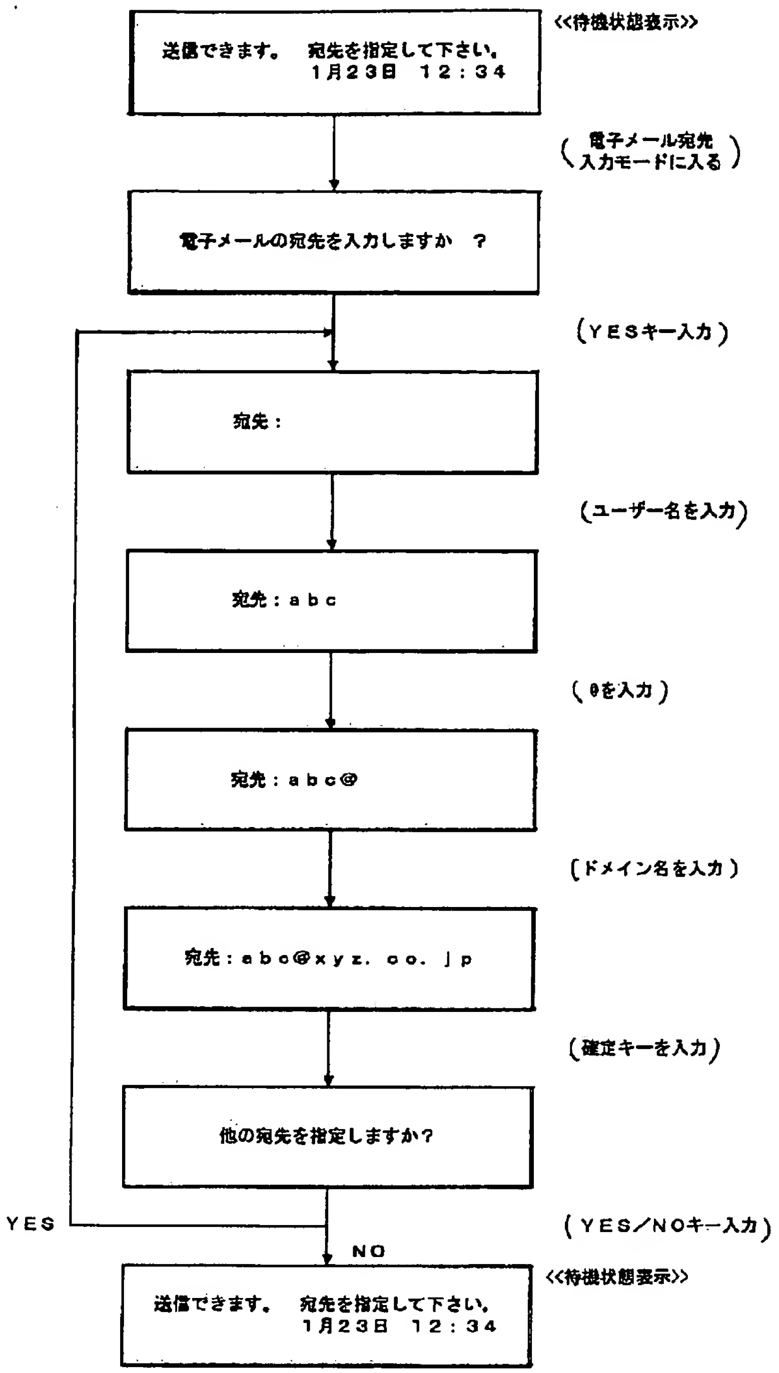
[Drawing 3]

ドメイン名＃1
ドメイン名＃2
ドメイン名＃3
・・・
ドメイン名＃m

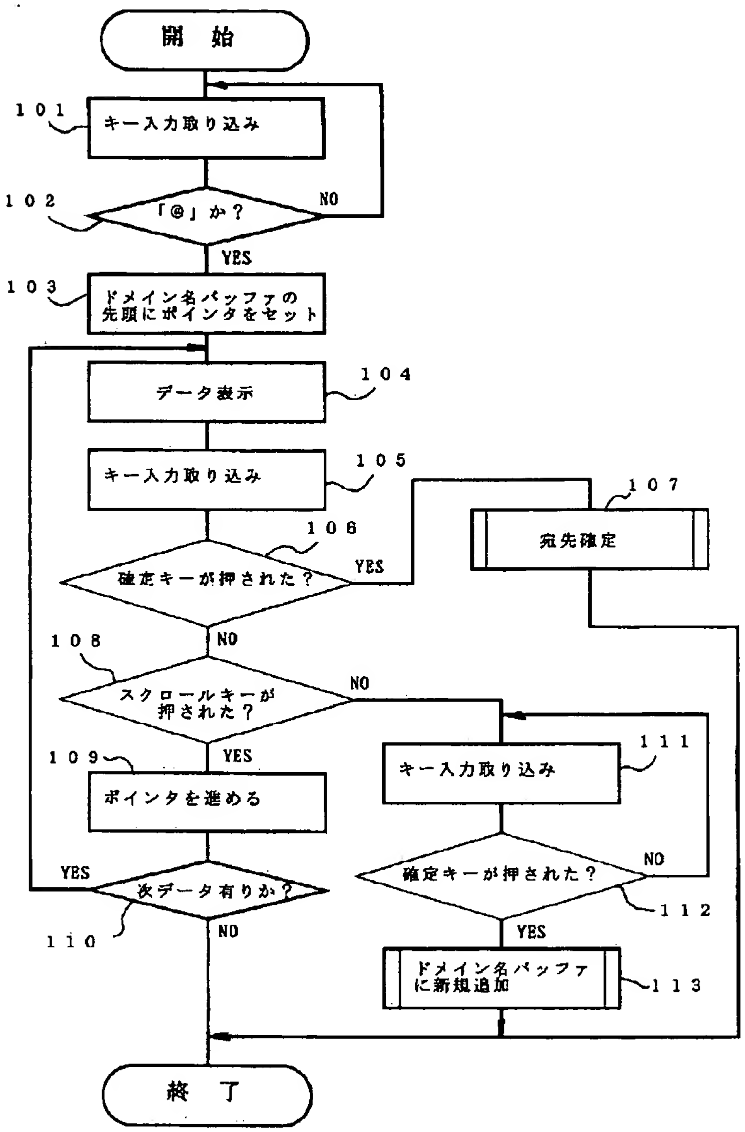
[Drawing 8]

ドメイン名＃1	使用回数＃1
ドメイン名＃2	使用回数＃2
ドメイン名＃3	使用回数＃3
・・・	・・・
ドメイン名＃m	使用回数＃m

[Drawing 4]

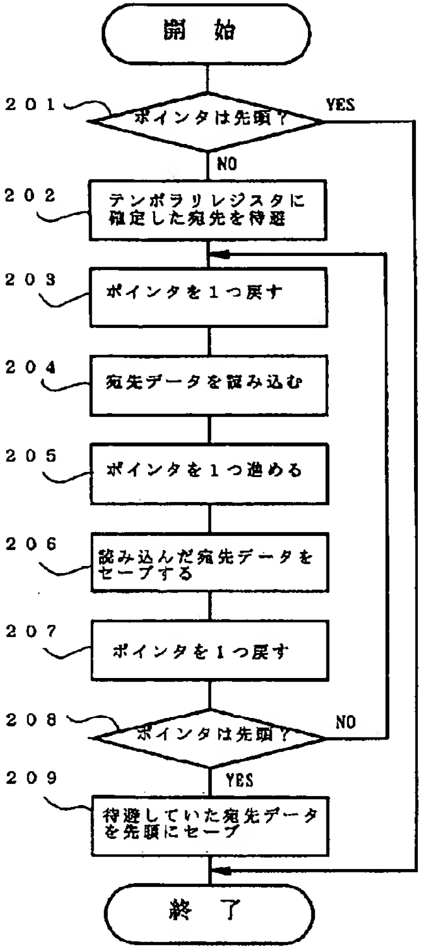

送信できます。　宛先を指定して下さい。
1月２３日　１２：３４
<<待機状態表示>>
（電子メール宛先入力モードに入る）
電子メールの宛先を入力しますか　？
（ＹＥＳキー入力）
宛先：
（ユーザー名を入力）
宛先：ａｂｃ
（＠を入力）
宛先：ａｂｃ＠
（ドメイン名を入力）
宛先：ａｂｃ＠ｘｙｚ．ｃｏ．ｊｐ
（確定キーを入力）
他の宛先を指定しますか？
ＹＥＳ
（ＹＥＳ／ＮＯキー入力）
ＮＯ
<<待機状態表示>>
送信できます。　宛先を指定して下さい。
1月２３日　１２：３４

[Drawing 5]


開　始
101
キー入力取り込み
102
「@」か？
NO
YES
103
ドメイン名バッファの
先頭にポインタをセット
104
データ表示
105
キー入力取り込み
107
宛先確定
106
確定キーが押された？
YES
NO
108
スクロールキーが
押された？
NO
YES
109
ポインタを進める
111
キー入力取り込み
YES
次データ有りか？
110
NO
確定キーが押された？
NO
112
YES
ドメイン名バッファ
に新規追加
113
終　了

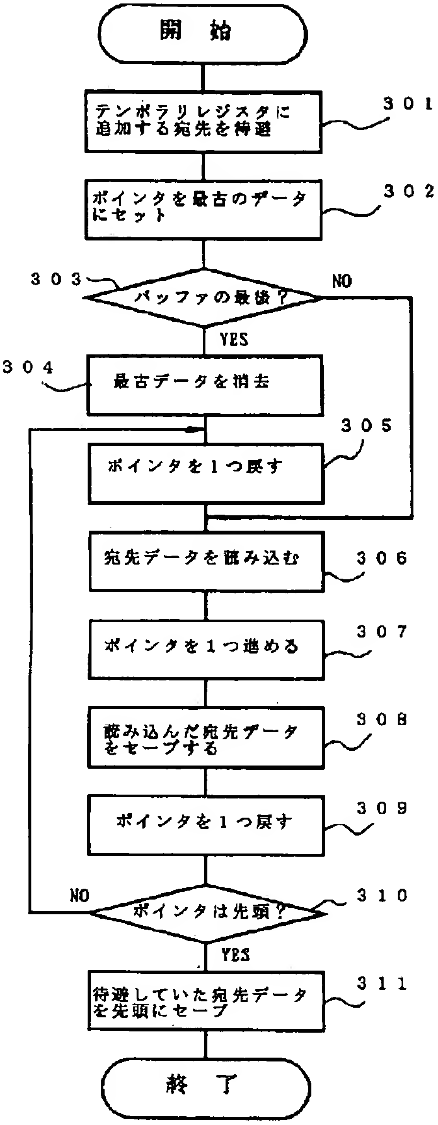
[Drawing 6]

11


開　始
201
ポインタは先頭？
YES
NO
202
テンポラリレジスタに確定した宛先を待避
203
ポインタを１つ戻す
204
宛先データを読み込む
205
ポインタを１つ進める
206
読み込んだ宛先データをセーブする
207
ポインタを１つ戻す
208
ポインタは先頭？
NO
209
YES
待避していた宛先データを先頭にセーブ
終　了

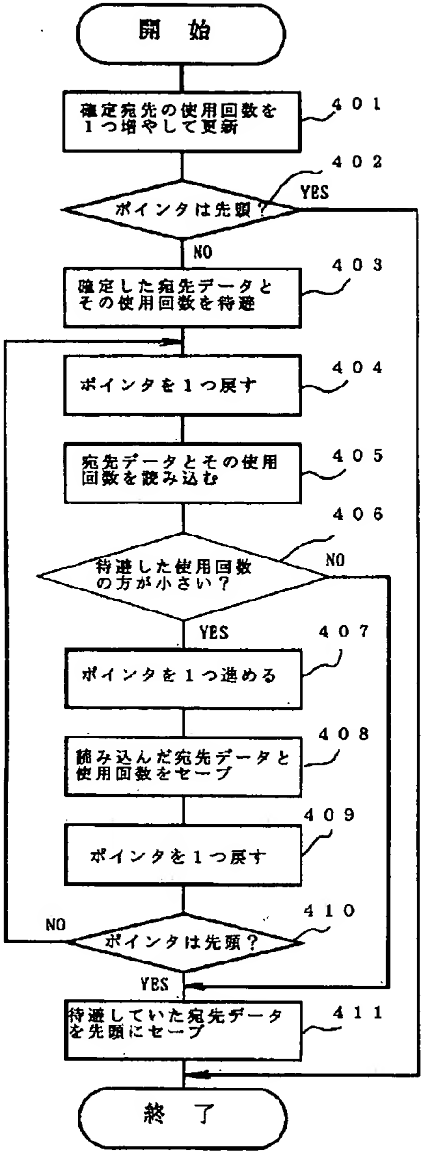
[Drawing 7]

X6 12

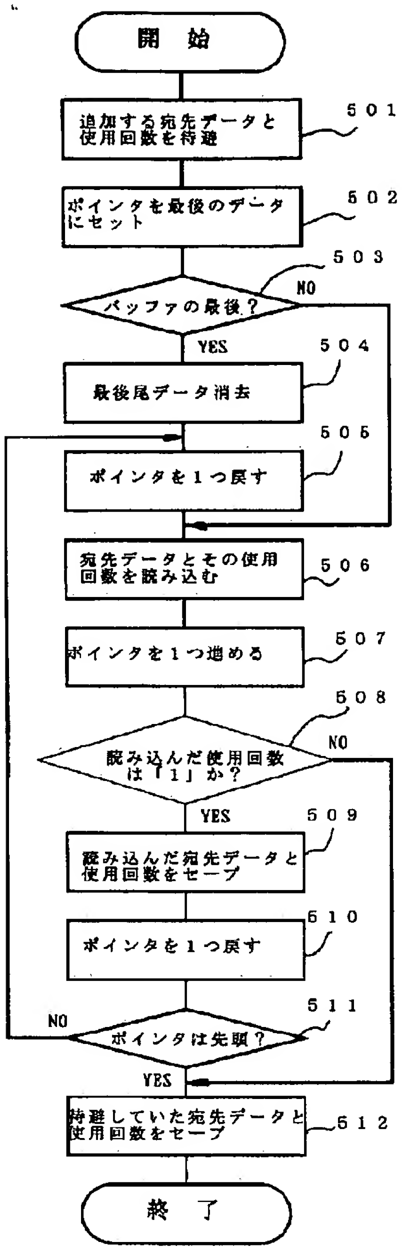

開始
テンポラリレジスタに追加する宛先を待避
301
ポインタを最古のデータにセット
302
303
バッファの最後？
NO
YES
304
最古データを消去
305
ポインタを１つ戻す
宛先データを読み込む
306
ポインタを１つ進める
307
読み込んだ宛先データをセーブする
308
ポインタを１つ戻す
309
NO
ポインタは先頭？
310
YES
待避していた宛先データを先頭にセーブ
311
終了

[Drawing 9]

13


開 始
401
確定宛先の使用回数を１つ増やして更新
402
ポインタは先頭？
YES
NO
403
確定した宛先データとその使用回数を待避
404
ポインタを１つ戻す
405
宛先データとその使用回数を読み込む
406
待避した使用回数の方が小さい？
NO
YES
407
ポインタを１つ進める
408
読み込んだ宛先データと使用回数をセーブ
409
ポインタを１つ戻す
410
NO
ポインタは先頭？
YES
411
待避していた宛先データを先頭にセーブ
終 了

[Drawing 10]


開　始
追加する宛先データと使用回数を待避
501
ポインタを最後のデータにセット
502
503
NO
バッファの最後？
YES
504
最後尾データ消去
505
ポインタを１つ戻す
宛先データとその使用回数を読み込む
506
ポインタを１つ進める
507
508
NO
読み込んだ使用回数は「１」か？
YES
509
読み込んだ宛先データと使用回数をセーブ
510
ポインタを１つ戻す
511
NO
ポインタは先頭？
YES
待避していた宛先データと使用回数をセーブ
512
終　了

[Translation done.]

15

Data Missing

This document resulted from a POST operation and has expired from the cache. If you wish you can repost the form data to recreate the document by pressing the **reload** button.

16

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MEANS

[Means for Solving the Problem] In a control method of network facsimile apparatus that this invention was equipped with a function of data on a Local Area Network of an exchange, and a function of facsimile data based on a facsimile-transmission procedure performed through a public network of an exchange It has an e-mail address input means to input an e-mail address for identifying a user on a Local Area Network. A domain name buffer which memorized hysteresis information on a domain name which consists of elements other than a user name of an inputted e-mail address is memorized. With the above-mentioned e-mail address input means If an input to a delimiter sign of a user name and a domain name is carried out, while memorizing the contents of an input till then as an input user name A domain name is made to read, display and choose from hysteresis information on a domain name memorized to the above-mentioned domain name buffer one by one, sequential connection of the above-mentioned input user name, the above-mentioned delimiter sign, and its selected domain name is carried out, and an e-mail address is formed. moreover, reading appearance of a domain name from said domain name buffer -- carrying out -- it is good to be made to carry out in order to a late thing from a near thing of memorized time. Moreover, read-out of a domain name from said domain name buffer is good to be made to carry out in order of operating frequency.
[0012]
[Embodiment of the Invention] Hereafter, the gestalt of operation of this invention is explained to details, referring to an accompanying drawing.
[0013] Drawing 1 shows the network system concerning one example of this invention.
[0014] In this drawing, two or more workstation equipments WS1-WSn, mail server equipment SM, and the network facsimile apparatus FX are connected to Local Area Network LAN.
[0015] Here, mail server equipment SM offers collection of an electronic mail (after-mentioned), and service of distribution to the user using the workstation equipments WS1-WSn connected to Local Area Network LAN, and the network network facsimile apparatus FX.
[0016] Moreover, various programs, such as application software which exchanges various data through Local Area Network LAN, and application software which processes the drawing information included in the electronic mail received from the network facsimile apparatus FX, are introduced into the workstation equipments WS1-WSn, and it is used by the specific user. Here, a specific user may be one person or two or more users.
[0017] Moreover, it connected with Local Area Network LAN, and it connected with the public network (PSTN) with the transmission function for exchanging drawing information as an electronic mail, and the network facsimile apparatus FX is equipped with the transmission function to perform the drawing information transmission by the group 3 facsimile-transmission procedure, using this public network as a transmission line.
[0018] Now, fundamentally in this example, an exchange of the data between [which is connected to Local Area Network LAN] terminals is performed by the combination (the so-called protocol suite) of the transmission protocol to the transport layer called the so-called TCP/IP and the communications protocol of the high order layer beyond it applying. For example, in an exchange of the data of an electronic mail, a communications protocol called SMTP (Simple Mail Transfer Protocol) is applied as a communications protocol of a high order layer.
[0019] Moreover, in this example, distribution of receiving drawing information to each user of the workstation equipments WS1-WSn from the network facsimile apparatus FX is performed using the electronic mail.
[0020] Moreover, at this example, once an electronic mail is accumulated in mail server equipment SM, it is transmitted with the transmission gestalt of the are recording distribution mold distributed to the destination.
[0021] That is, for example, the electronic mail from the network facsimile apparatus FX to the user of workstation equipment WS 1 is once accumulated in mail server equipment SM.
[0022] On the other hand, when electronic mail reception of addressing to a user in the end of a local is asked and the electronic mail addressed to a user is accumulated in mail server equipment SM to mail server equipment SM the proper period, from mail server equipment SM, the workstation equipments WS1-WSn and the network facsimile apparatus FX receive the electronic mail, and notify a user of that in the end of a local.
[0023] Therefore, since it is notified in this case that the electronic mail addressed to the user in the end of a local is accumulated in mail server equipment SM when workstation equipment WS 1 asks mail server equipment SM electronic mail reception of addressing to a user in the end of a local, that electronic mail is received and that is notified to a user by the proper method.
[0024] A carrier beam user reads the contents of that electronic mail for this notice, and the contents are checked. In this case,

X 17

as mentioned later, in being what contains binary data like for example, facsimile drawing information as contents of the electronic mail, the application which can process that binary data appropriately is started, and it checks the contents of the electronic mail. However, direct binary data cannot be included in an electronic mail, and it includes in an electronic mail in the condition of having changed into legible information (7-bit character code) with the application of the predetermined conversion method. The format of such an electronic mail is called MIME (refer to Multipurpose Internet - Extensions(multiple-purpose mail);RFC (after-mentioned)1521 and RFC1522 grade) format.

[0025] Here, each terminal can apply the so-called POP (Post Office Protocol) etc. to mail server equipment SM as a protocol applied for the confirmation of receipt of the electronic mail addressed to a user, a Request to Send, etc.

[0026] Moreover, communications protocols, such as TCP/IP, and SMTP, POP, data format, a data structure of an electronic mail, etc. are prescribed by the RFC (Request For Comments) document published from the organization which is summarizing the technical contents about the Internet called IETF (Internet Engineering Task Force), respectively. For example, RFC793 and IP are prescribed by RFC793 and the format of RFC821 and an electronic mail is prescribed [TCP / RFC822 RFC1521, RFC1522, and POP] for SMTP by RFC1725, respectively.

[0027] Drawing 2 shows the example of a configuration of the network facsimile apparatus FX.

[0028] In this drawing the system control section 1 Control processing of each part of this facsimile apparatus, It is what performs various control processings, such as facsimile-transmission control-procedure processing. And a system memory 2 When performing the control processing program which the system control section 1 performs, and a processing program, while memorizing various required data etc. Constituting the work area of the system control section 1, the parameter memory 3 is for memorizing various kinds of information peculiar to this facsimile apparatus, and the clock circuit 4 outputs current time information.

[0029] A scanner 5 is for reading a manuscript image in predetermined resolution, and a plotter 6 is for carrying out the record output of the image in predetermined resolution, the actuation display 7 is for operating this facsimile apparatus, and it consists of various kinds of actuation keys and various kinds of drops.

[0030] The coding decryption section 8 is for decrypting the drawing information by which coding compression is carried out to the original picture signal, while carrying out coding compression of the picture signal, and image storage equipment 9 is for memorizing much drawing information in the condition that coding compression was carried out.

[0031] The group 3 facsimile modem 10 is for realizing the modem function of group 3 facsimile, and is equipped with the slow-modem function (V. 21 modems) for exchanging a transmission protocol signal, and the fast modem function (V. 17 modems, a V.34 modem, V.29 modem, V.27ter modem, etc.) for mainly exchanging drawing information.

[0032] A network control unit 11 is for connecting this facsimile apparatus to the international circuit network PSTN, and is equipped with the automatic sending-and-receiving function.

[0033] The Local Area Network interface circuitry 12 is for connecting this Internet facsimile apparatus to Local Area Network LAN, and the Local Area Network transmission control section 13 is for performing communications control processing of the protocol suite predetermined [various] for exchanging various data among other Data Terminal Equipments through Local Area Network LAN.

[0034] These system control sections 1, a system memory 2, the parameter memory 3, the clock circuit 4, a scanner 5, a plotter 6, the actuation display 7, the coding decryption section 8, image storage equipment 9, the group 3 facsimile modem 10, a network control unit 11, and the Local Area Network transmission control section 13 are connected to the internal bus 14, and the exchange of the data between each of these elements is performed mainly through this internal bus 14.

[0035] Moreover, the exchange of the data between a network control unit 11 and the group 3 facsimile modem 10 is performed directly.

[0036] Now, to transmit drawing information to the user using Local Area Network LAN using an electronic mail, it is necessary to specify the purpose user using the e-mail address currently assigned to the user.

[0037] As for the graphic character which this e-mail address has the format which connected the user name and the domain name of a network proper through the delimiter sign (usually "@") as mentioned above, and constitutes a character string, an alphabetic character is applied.

[0038] In this case, the actuation display 7 of the network facsimile apparatus FX is equipped with the screen-display machine (for example, liquid crystal display) for checking the e-mail address inputted as the key input equipment which can input an e-mail address, and a desired e-mail address can be inputted now into it.

[0039] And in this example, as shown in drawing 3 , only the portion of the domain name of the e-mail address by which the actuation input was carried out until now is extracted. In case it has the domain name buffer memorized in the used order and a user inputs a destination user's e-mail address As shown in drawing 4 , a user inputs to the user name of a destination user's e-mail address, and a delimiter sign "@" in the phase which carried out the actuation input While displaying the domain name memorized to the domain name buffer If a user is made to choose the domain name of a destination user's e-mail address as renewal of sequential of the contents of a display can be carried out, and an input is decided Sequential connection of the user name then inputted, and a delimiter sign "@" and its selected domain name is carried out, and a destination user's e-mail address is formed.

[0040] It enables it to reduce the time and effort of the user at the time of inputting a destination user's e-mail address by this.

[0041] An example of the e-mail address input process in this case is shown in drawing 5 .

[0042] First, a pointer will be set to the head of a domain name buffer, if key input data is incorporated (processing 101, NO loop of decision 102), a delimiter sign "@" is inputted and the result of decision 102 is set to YES until a delimiter sign "@"

is inputted (processing 103).
[0043] Next, the data of the domain name buffer corresponding to the pointer is taken out and displayed (processing 104), and a user's key input data is incorporated (processing 105). In order to use the domain name as which the user was displayed at this time, it investigates whether the definite key was operated (decision 106). When the result of decision 106 is set to YES by the case where a user operates a definite key While forming the e-mail address which consists of a user name then inputted and a fixed domain name and outputting the e-mail address as a destination user's e-mail address Destination decision processing (processing 107) which updates a domain name buffer is performed, and this processing is ended.
[0044] Moreover, when it investigates whether the key data inputted by processing 105 is a scrolling key when the result of decision 106 is set to NO (decision 108) and the result of decision 108 is set to YES, one pointer which directs the contents of the domain name buffer is carried forward (processing 109). Here, when it investigates whether there is any following data (decision 110) and the result of decision 110 is set to NO, the contents of return and the domain name buffer which a pointer newly directs are displayed on processing 104.
[0045] moreover, by the case where the key data inputted by processing 105 is other, when the result of decision 108 is set to NO Since it is the case where a user does the actuation input of the electronic mail of the destination user of a new domain name If key input data is incorporated (processing 111, NO loop of decision 112), a definite key is pressed and the result of decision 112 is set to YES until a definite key is pressed While forming the e-mail address which consists of a user name then inputted and a domain name and outputting the e-mail address as a destination user's e-mail address New addition processing (processing 113) is performed to the domain name buffer which updates an addition for the domain name newly inputted into the domain name buffer, and this processing is ended.
[0046] Drawing 6 shows an example of destination decision processing (processing 107).
[0047] First, it is the case where the domain name used immediately before is used again, and when it investigates whether a pointer is in the head of a domain name buffer (decision 201) and the result of decision 201 is set to YES, since it is not necessary to update a domain name buffer, ** and this processing are ended.
[0048] Moreover, when the result of decision 201 is set to NO, it is the case where domain names other than the domain name used immediately before are used. Then, while saving the newly used domain name at the head of a domain name buffer, the element of the other domain name is moving to a storing location old one [at a time] one by one, and updates a domain name buffer (processing 202 - processing 209).
[0049] Drawing 7 shows an example of new addition processing (processing 113) to the domain name buffer.
[0050] First, the domain name of the destination added to a temporary buffer is shunted (processing 301), and a pointer is updated so that the oldest data of a domain name buffer may be directed (processing 302).
[0051] subsequently, the oldest data of a domain name buffer -- deleting (processing 304) -- the element of the other domain name buffer moves to a storing location old one [at a time] one by one (processing 305 - decision 310), saves the domain name which shunted to the temporary buffer at the head of a domain name buffer (processing 311), and ends this processing.
[0052] By the way, although he is trying to take out in the example mentioned above in the order which had the element of a domain name buffer used, it can take out in order of operating frequency. In that case, as shown in drawing 8 , a domain name and a use count are saved as one element of a domain name buffer.
[0053] And a domain name can be made displayed in order of operating frequency in the e-mail address input process shown in drawing 5 in arranging the list of the element of this domain name buffer from a head in order with many use counts.
[0054] An example of the destination decision processing in this case (processing 107) is shown in drawing 9 .
[0055] First, one value of the use count memorized by the domain buffer corresponding to the domain name of the definite destination is increased (processing 401). Subsequently, it is the case where the highest domain name of operating frequency is used again, and when it investigates whether a pointer is in the head of a domain name buffer (decision 402) and the result of decision 402 is set to YES, since it is not necessary to update a domain name buffer, ** and this processing are ended.
[0056] Moreover, when the result of decision 402 is set to NO, it is the case where domain names other than the highest domain name of operating frequency are used. Then, including the newly used domain name, each element of a domain name buffer is rearranged in order of a use count, and a domain name buffer is updated (processing 404 - processing 411).
[0057] An example of new addition processing (processing 113) is shown in the domain name buffer in this case at drawing 10 .
[0058] First, the domain name and use count (since it is the beginning, a value is "1") of the destination to add are shunted (processing 501), and a pointer is updated so that the last data of a domain name buffer may be directed (processing 502).
[0059] Subsequently, while deleting the last data of a domain name buffer, including the newly used domain name, the element of the other domain name buffer rearranges each element of a domain name buffer in order of a use count, and updates a domain name buffer (processing 503 - processing 512).
[0060] In addition, in the example mentioned above, although the data element of a domain name buffer is used as fixed-length data, it can also consider as a variable-length data.

[Translation done.]